

# Fibre-optics for use in metal-enhanced fluorescence sensing

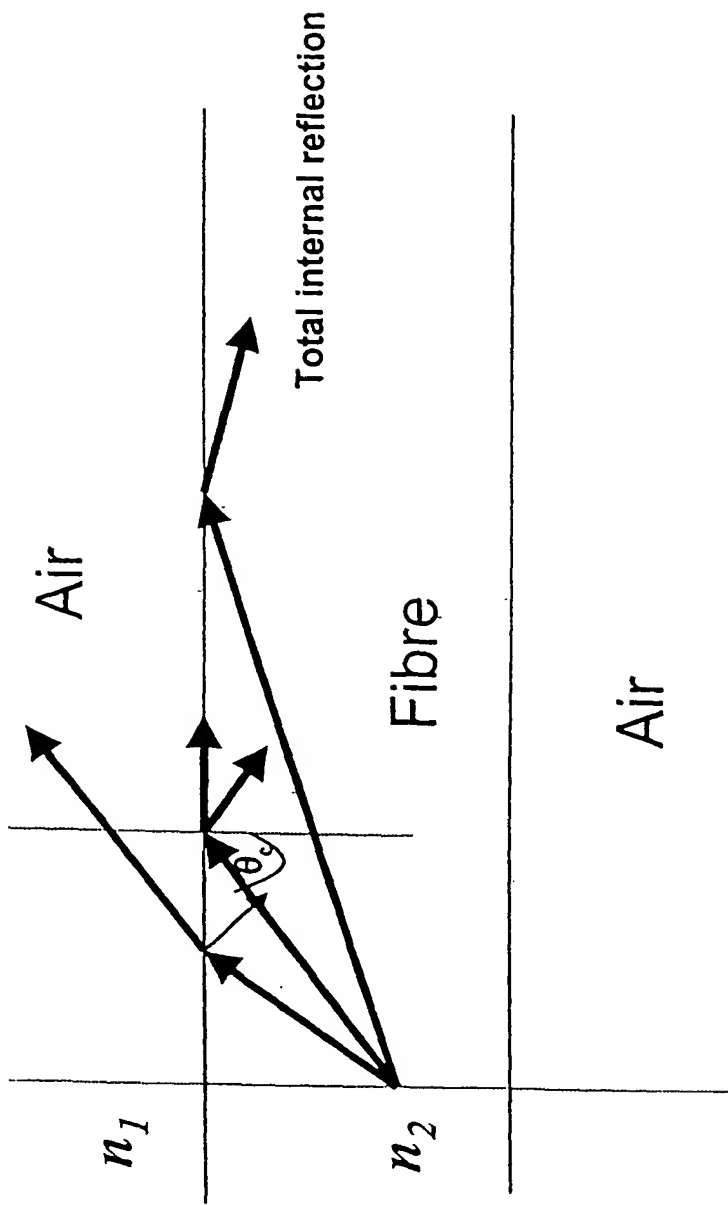
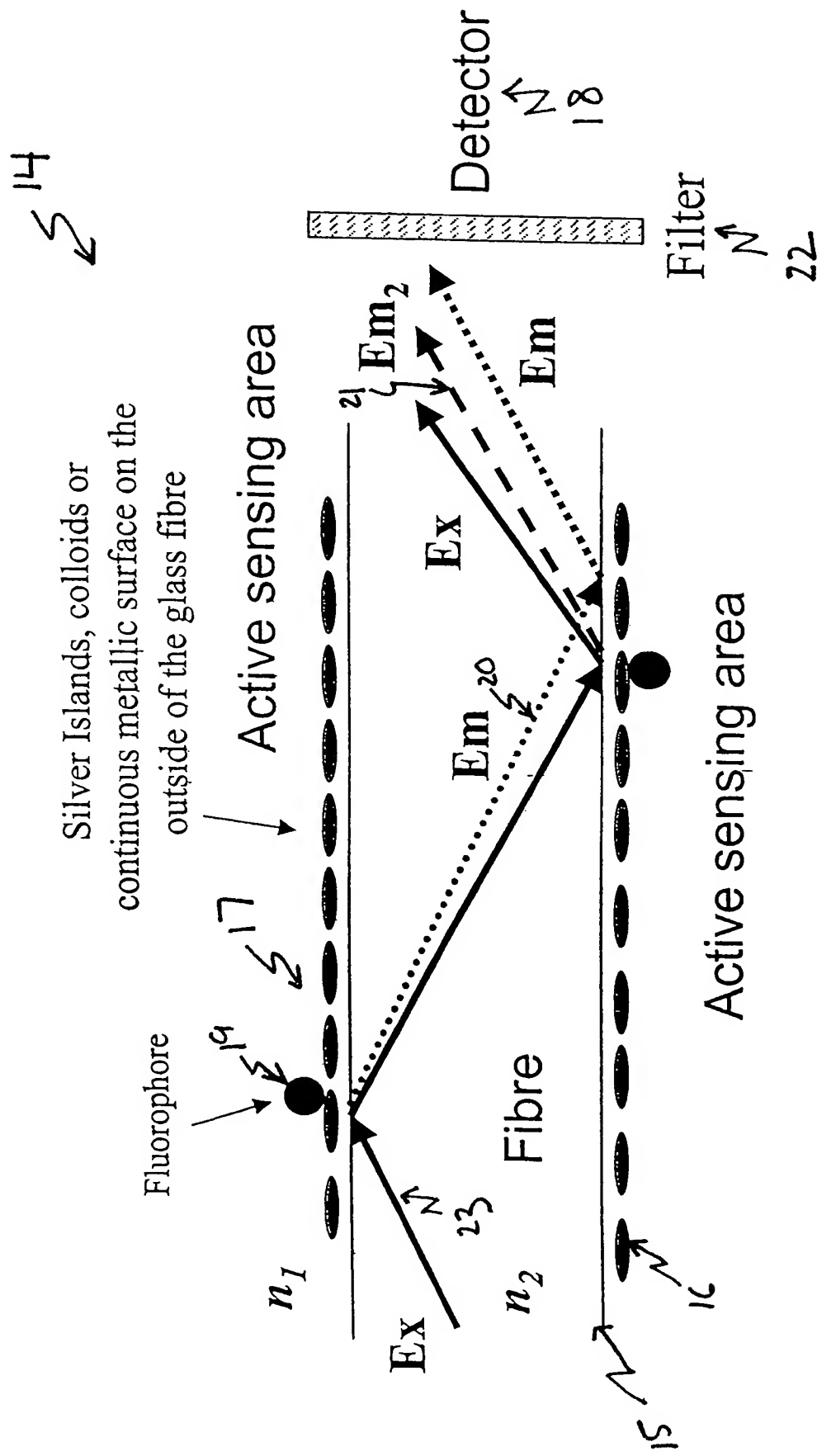


Fig. 1.

# Fibre-optics for use in metal-enhanced fluorescence sensing



**Fig.2.**

# Fibre-optics for use in metal-enhanced fluorescence sensing

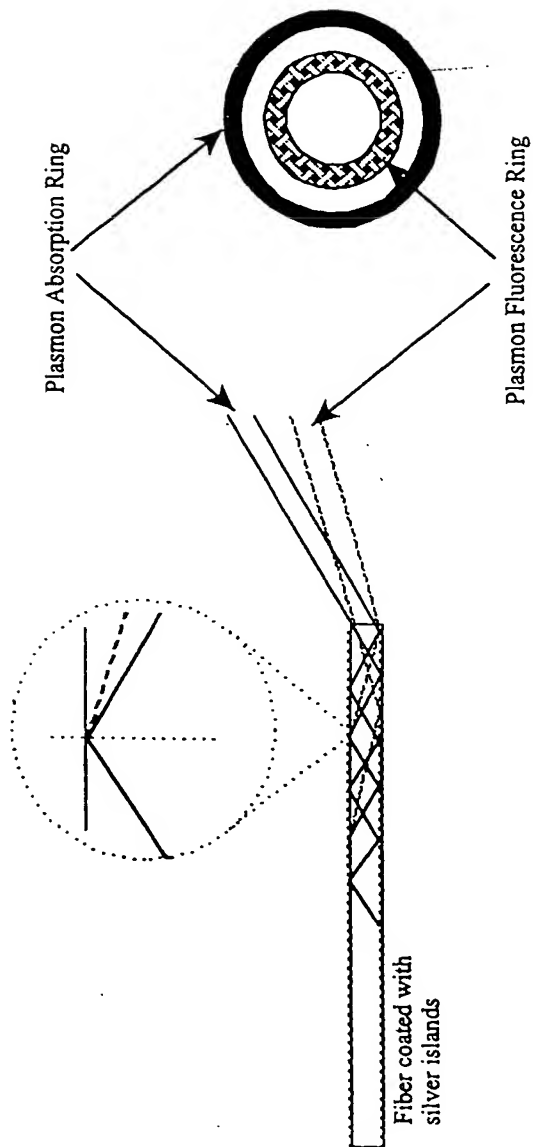
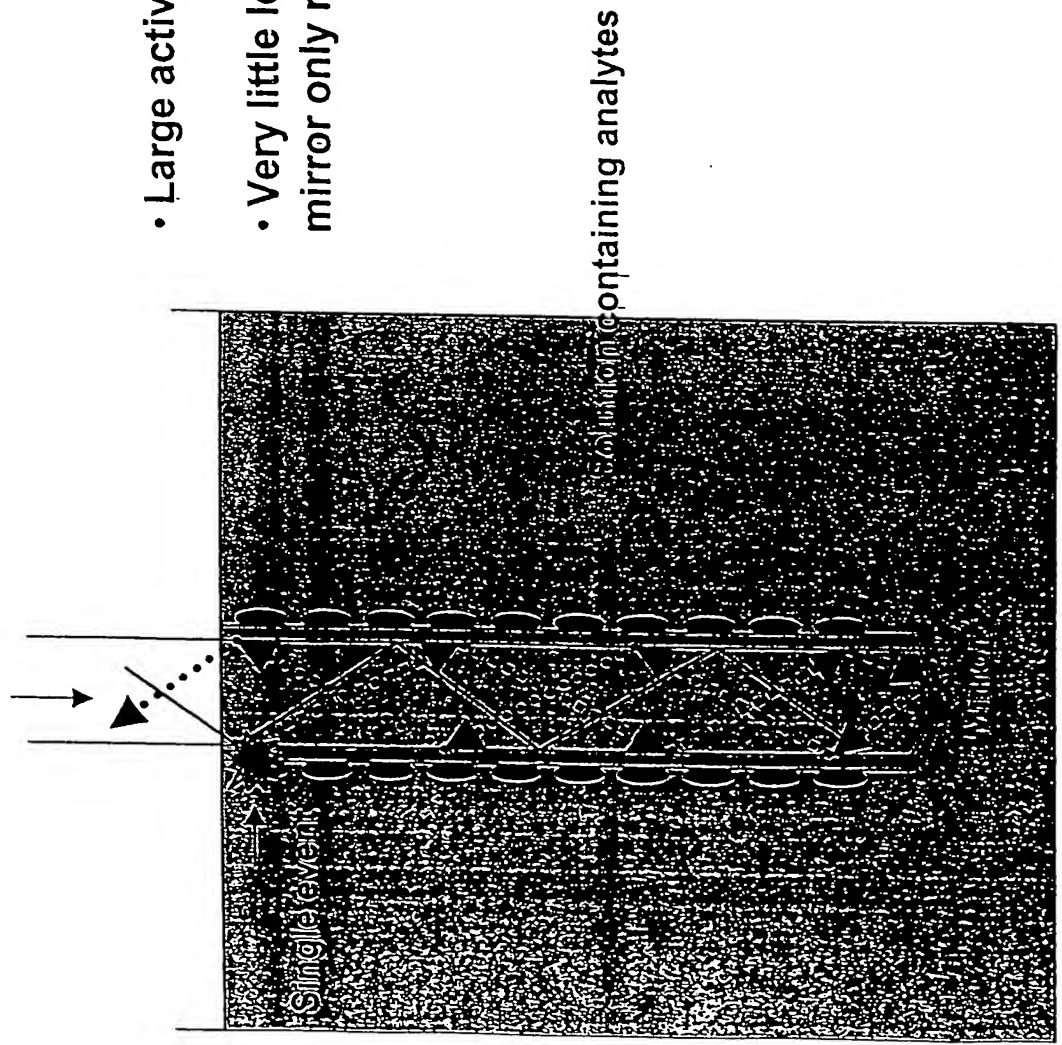


Fig. 3.

# Fibre-optics for use in metal-enhanced fluorescence sensing

## Ex source and Em detector



- Large active surface area of fibre
- Very little losses via TIR. In comparison a mirror only reflects 95 % of the light at best.

Fig. 4.

# Fibre-optics for use in metal-enhanced fluorescence sensing

## Application

Fluorescence Immunoassays with Non-Fluorescent or fluorescent Chromophores on the surface of the fibre

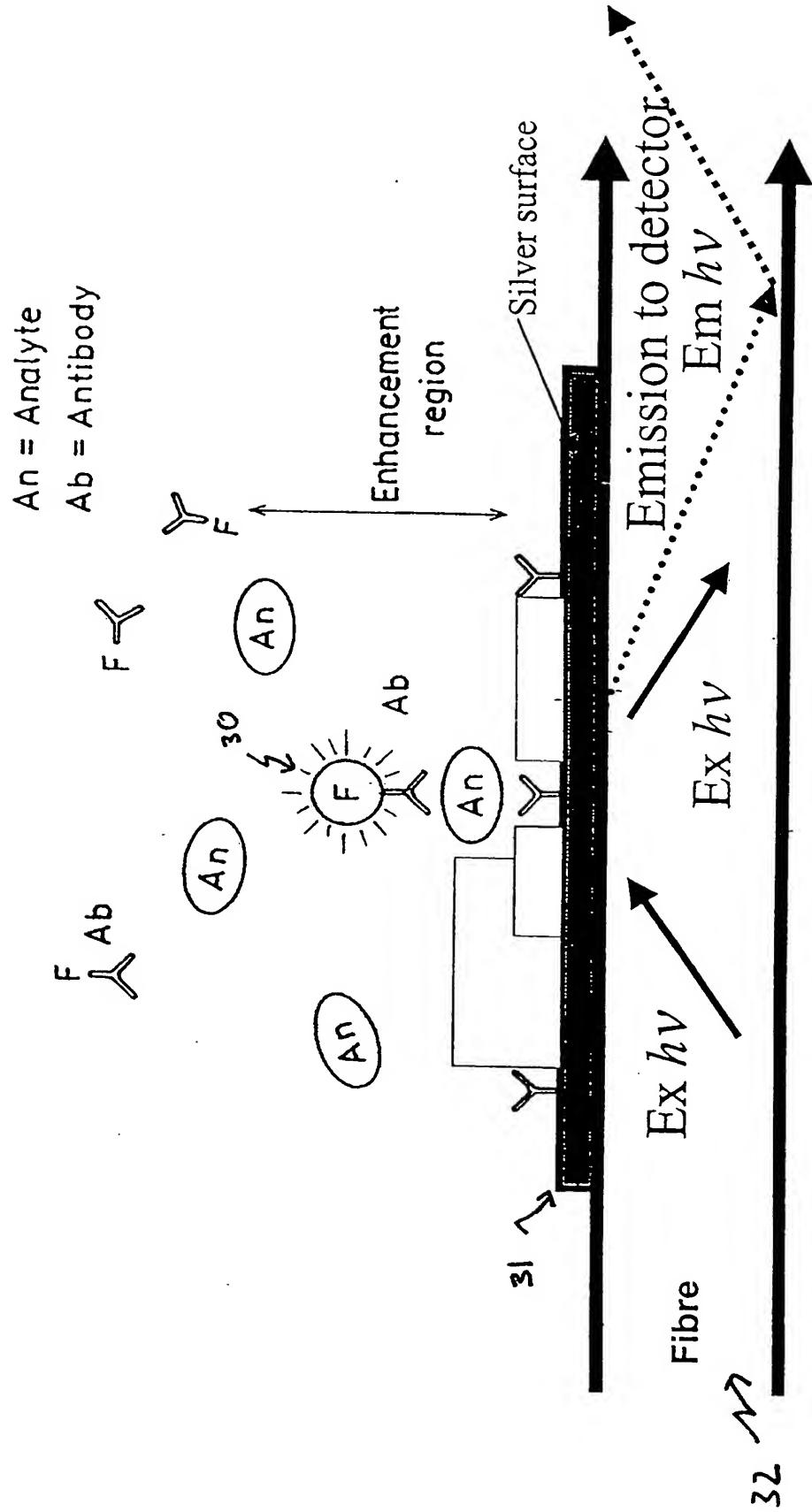


Fig. 5.

# Optical structures for metal enhanced fluorescence sensing

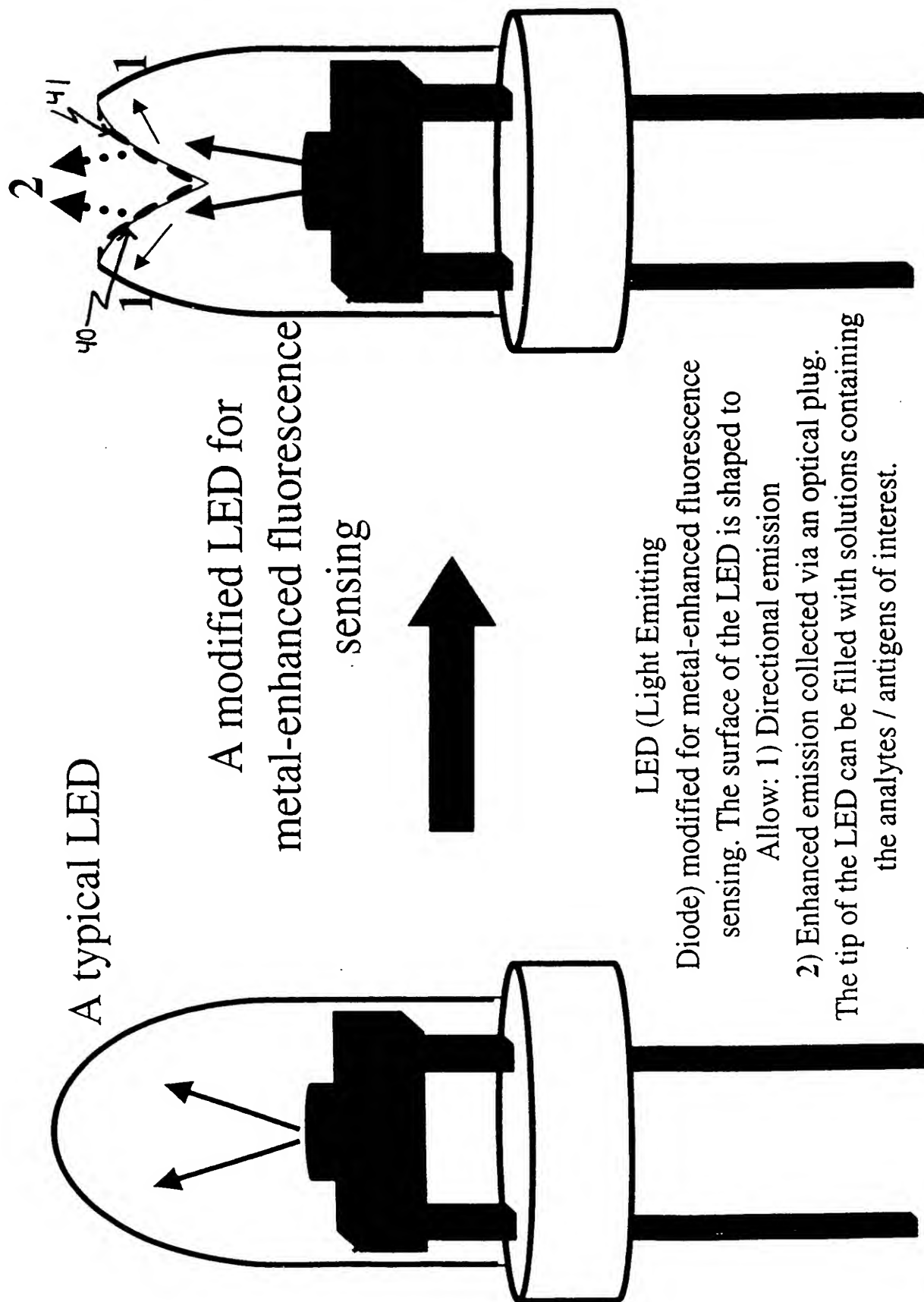


Fig. 1-6

Optical structures for metal enhanced fluorescence sensing

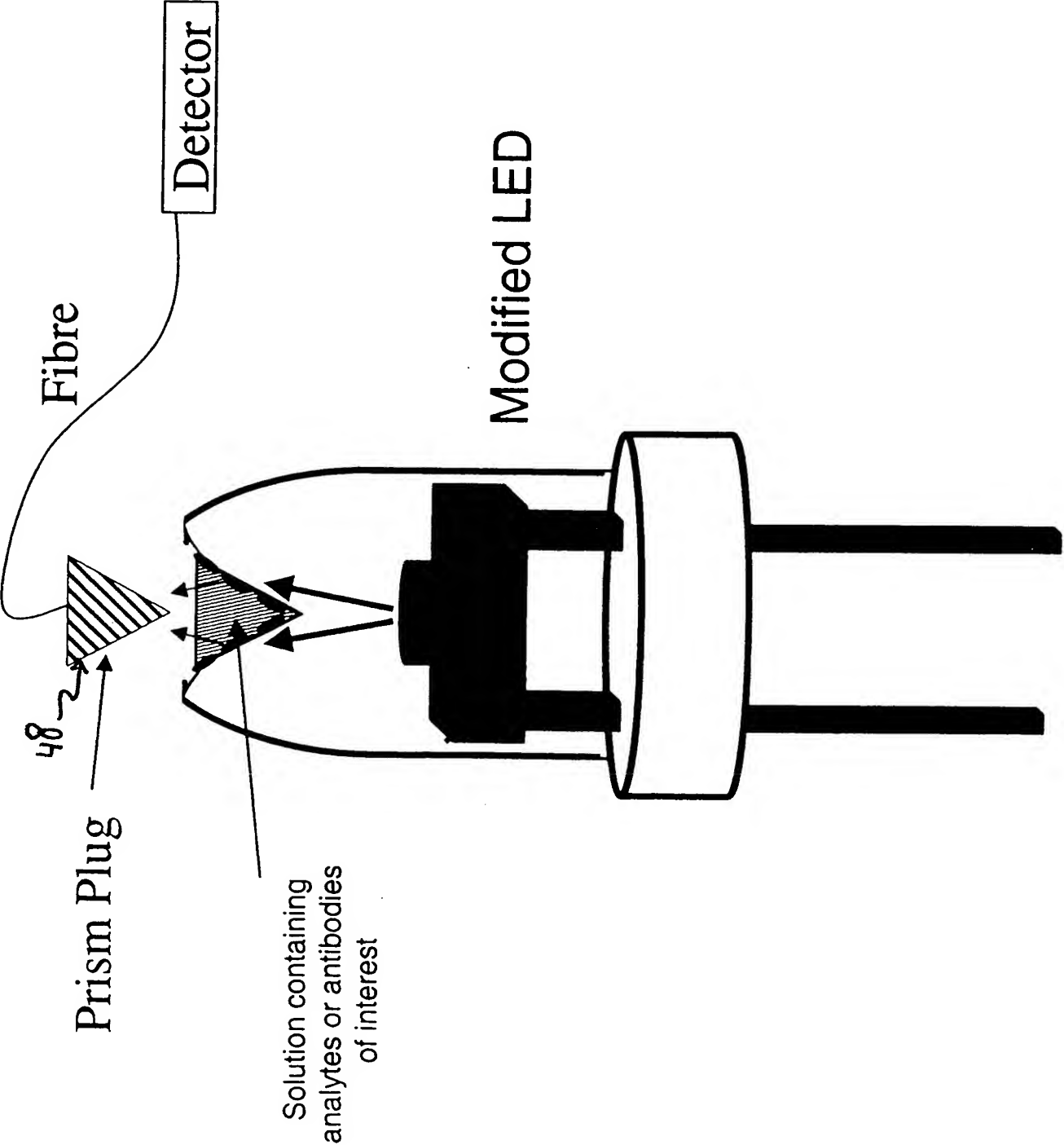
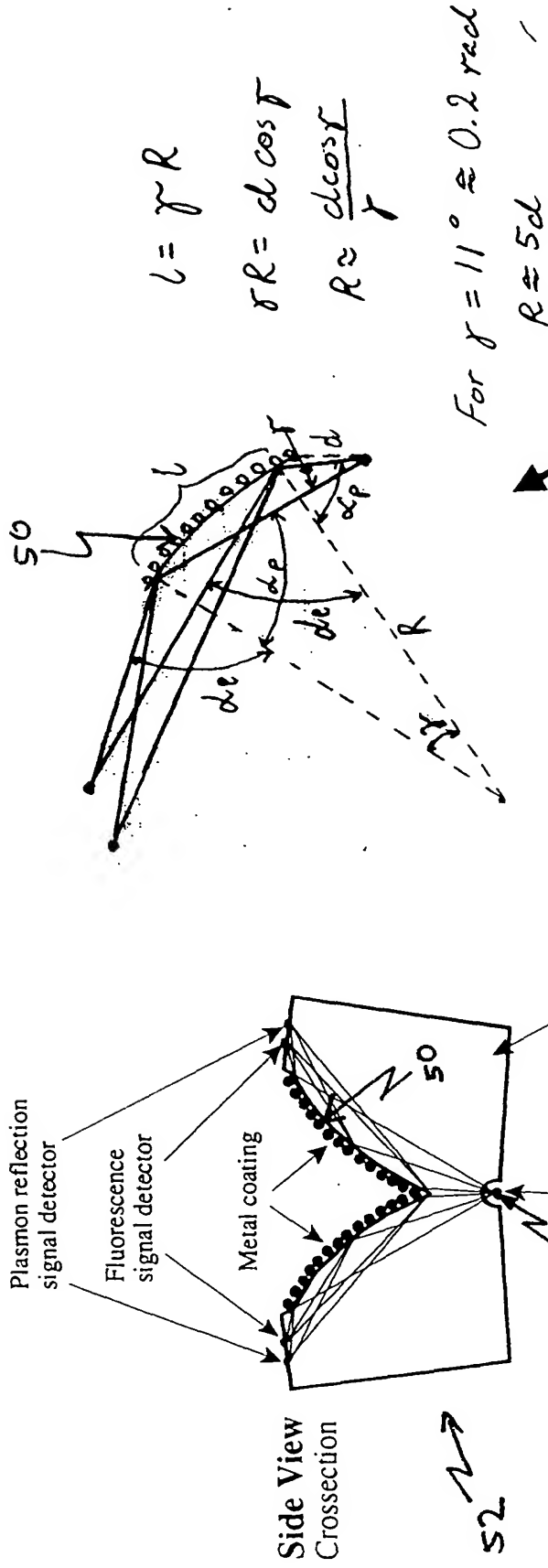


Fig. 2: 7

Modified LED surface or disposable cartridge that goes over the top of a light source or even ambient light



Radius of curvature  
 for directional emission  
 can be easily calculated

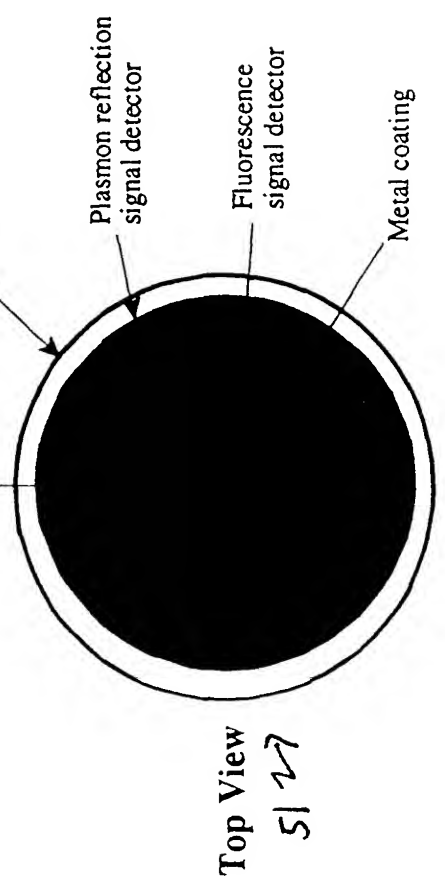


Fig. 3.8

# Optical structures for metal enhanced fluorescence sensing

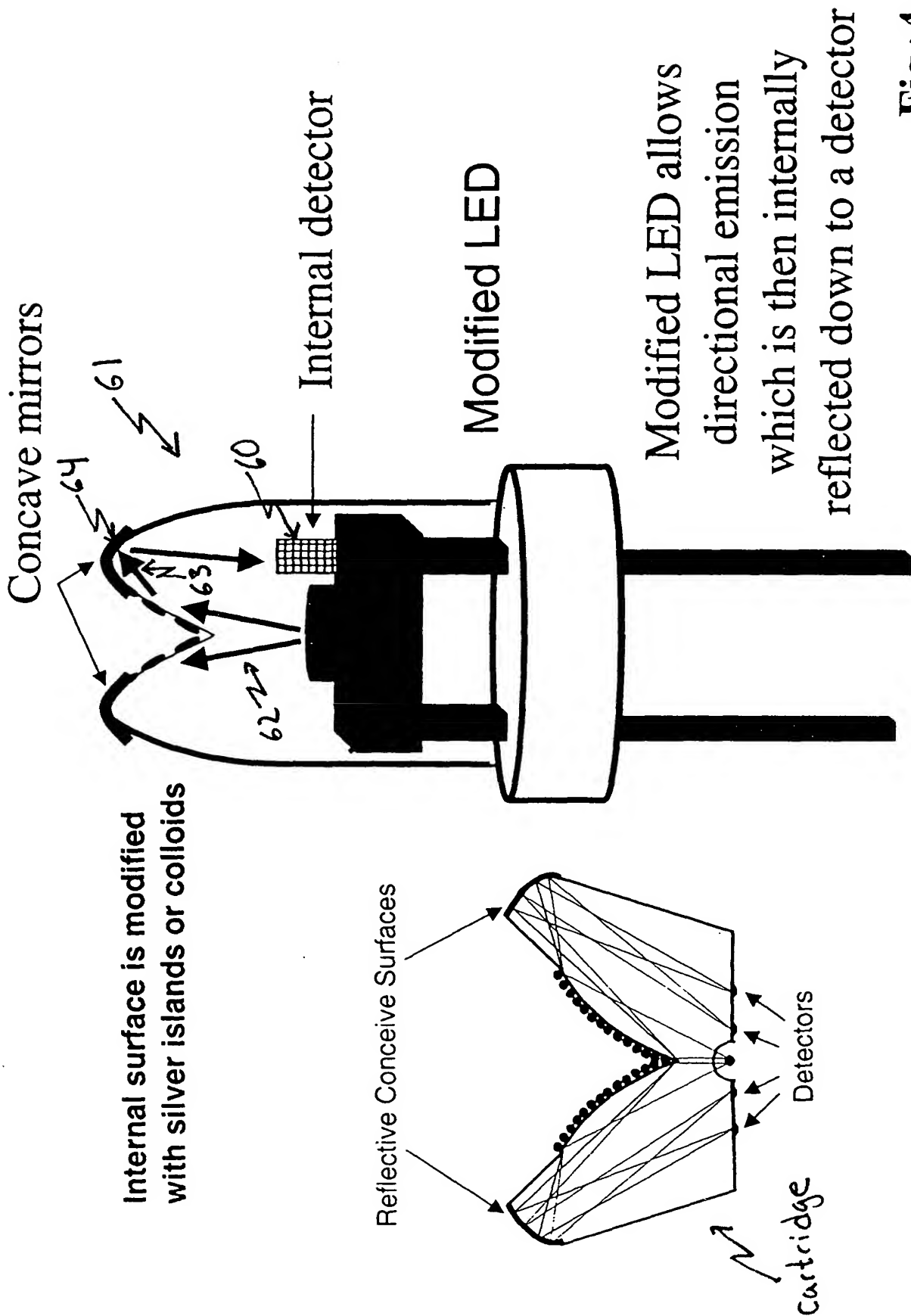


Fig. 4.9

# Applications Fluorescence Immunoassays with Non-Fluorescent or fluorescent Chromophores on the surface of the LED

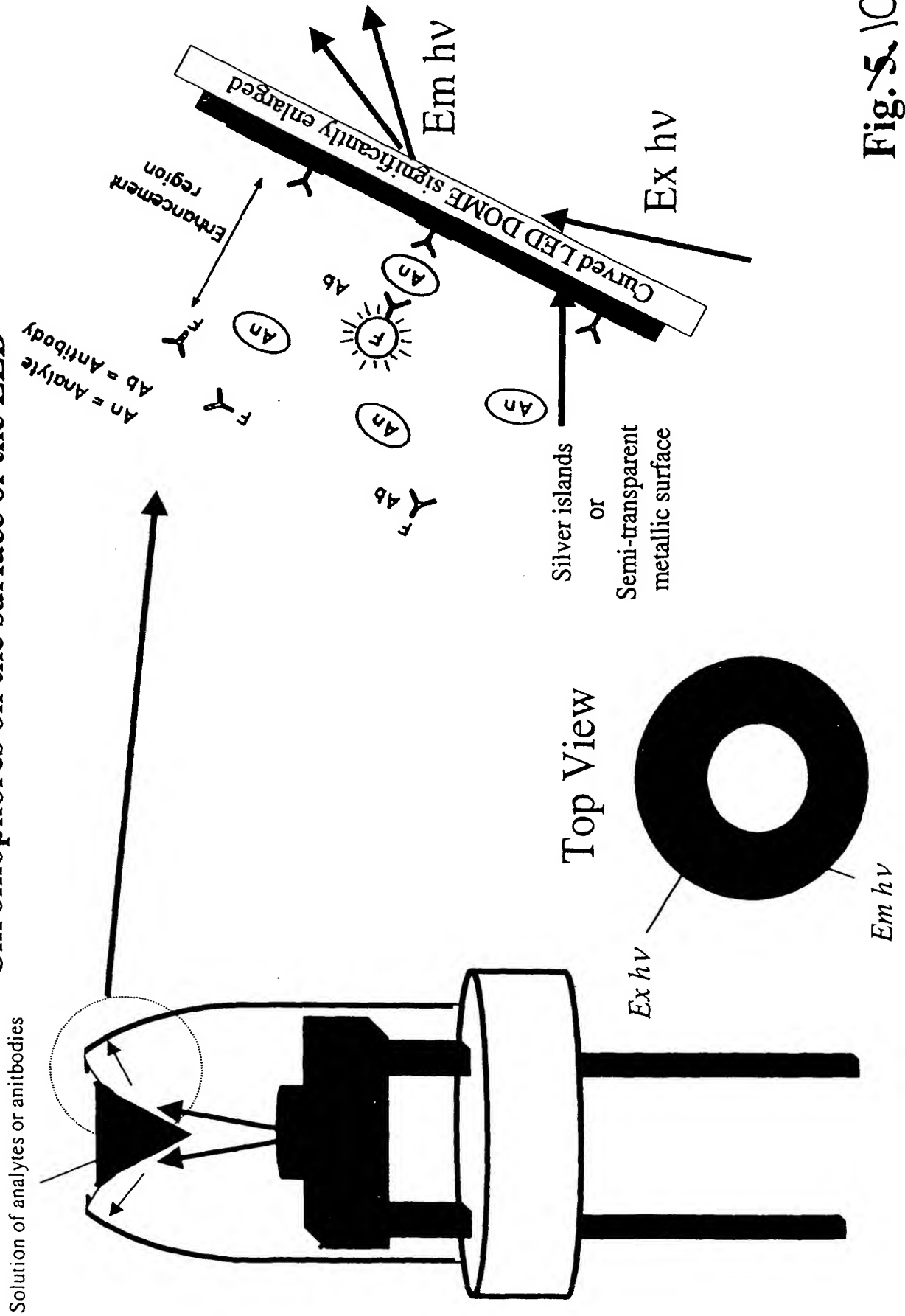


Fig. 5/10

# Applications

## Resonance Energy Transfer Immunoassays on the surface of the modified LED

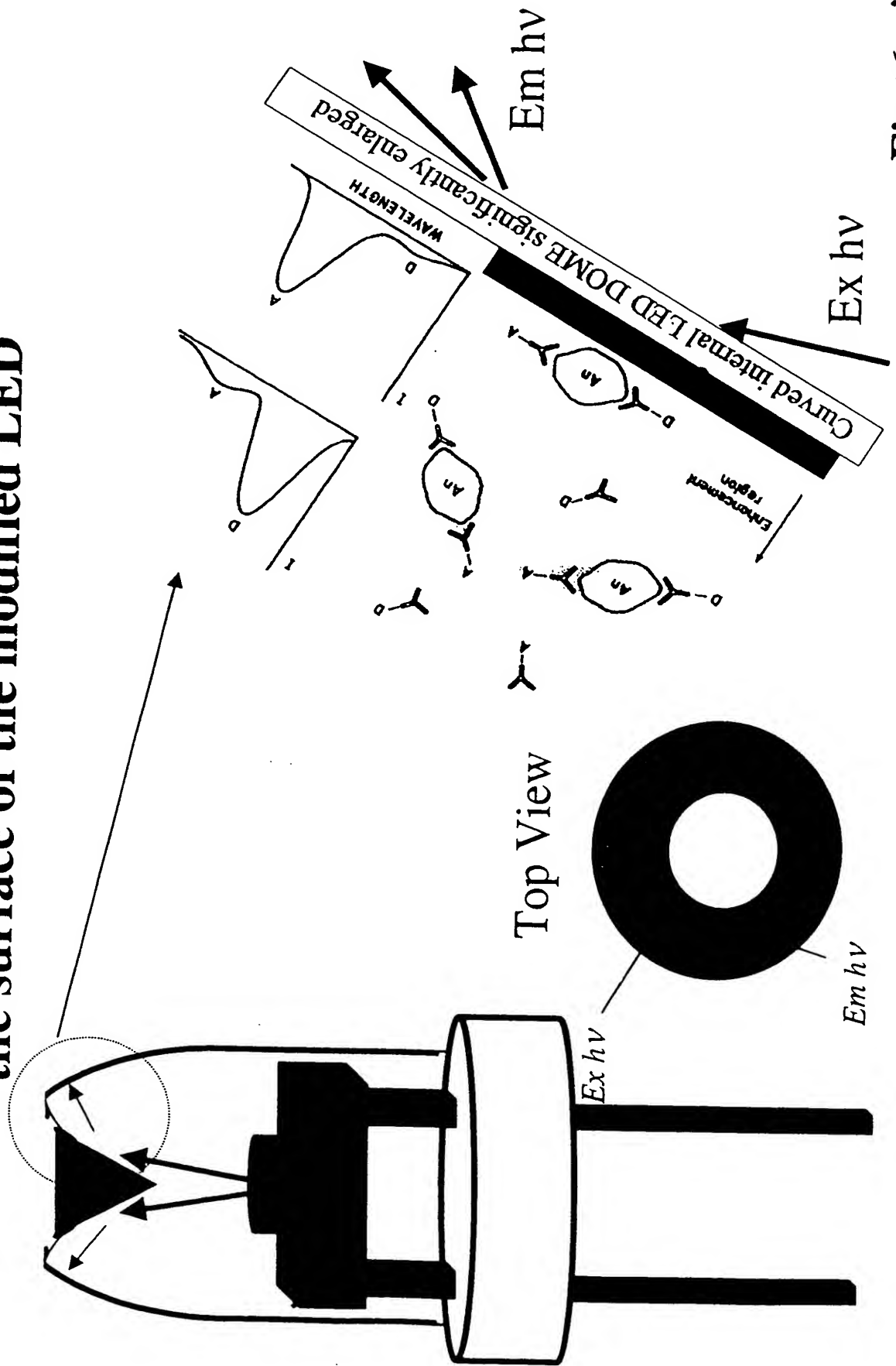


Fig. 6. 11

# Applications Size inclusion/exclusion sensing on the surface of the LED

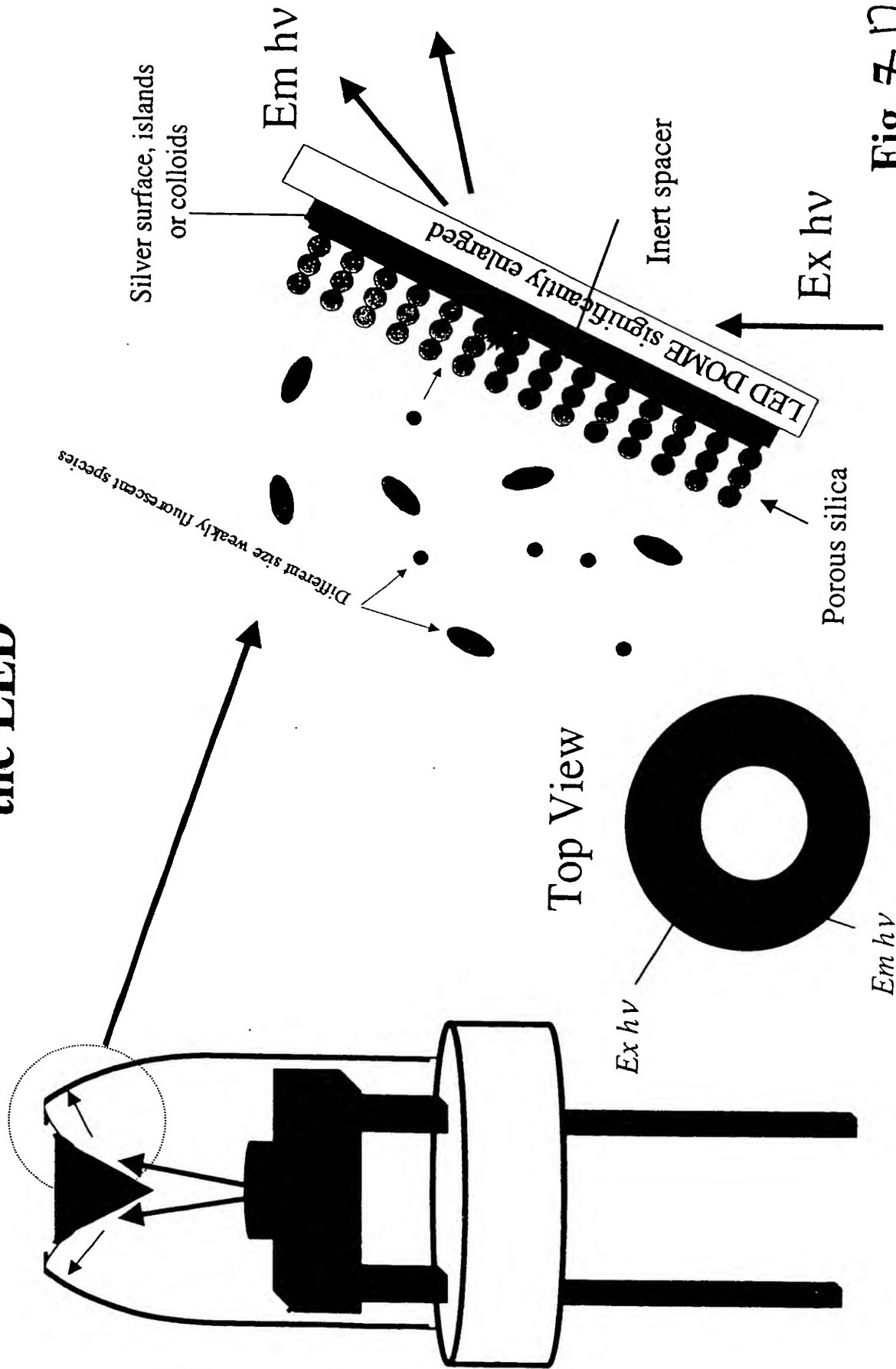


Fig. 7.12